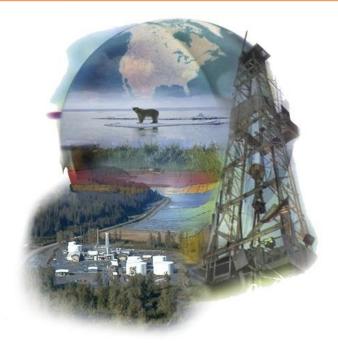
# Internet-Based, GIS Catalog of Non-Traditional Sources of Cooling Water for Use at America's Coal-Fired Power Plants

**Project Number:** DE-NT0005957



David Alleman
ALL Consulting

NETL Project Kick-off Meeting
October 28, 2008



## **Project Facts**

**Project Number:** DE-NT0005957

**Funding:** 

**DOE:** \$ 451,385

**Cost Share:** \$ 177,250

**Total Cost:** \$ 628,635

Period of Performance: 36 Months



## **Project Performers**

#### **Recipient:**

**ALL Consulting** 

Principal Investigator: Dan Arthur, President

**Primary Partner:** 

**Ground Water Protection Council (GWPC)** 



## Arthur Langhus Layne, LLC.

dba ALL Consulting

Energy, Engineering and Environmental Consultants

**HubZone Certified Small Business** 

Headquartered in Tulsa, OK
Offices in MT, NM, TX, MO, and LA



#### **ALL Consulting**

#### **Extensive Experience in:**

- Oil and Gas Private Industry Work and Research with NETL
  - Beneficial Use of Produced Water
  - Water Management
  - Underground Injection Control
  - Coal Bed Methane
  - Shale Gas
  - Environmental
  - CO<sub>2</sub> EOR
  - Environmental Planning/Permitting
- NEPA/Environmental Reviews
  - Bureau of Land Management
  - Forest Service
  - Corps of Engineers



#### Ground Water Protection Council (GWPC)

- National association of state ground water and underground injection control agencies whose mission is to promote the protection and conservation of ground water resources for all beneficial uses
- Provides a forum for stakeholder communication and research in order to improve governments' role in the protection and conservation of ground water
- Membership includes more than 35 state water agencies, oil and gas associations, coal associations, public utility associations, etc.
- Working closely with NETL and EPA on CO<sub>2</sub> injection issues



## Need for the NETL Program

- ➤ Water is a Looming National Crisis
  - "Water is the oil of the 21st Century"
  - "Water, unlike oil, has no substitute"
  - "Water consumption is doubling every 20 years"
  - "Water is not discretionary"
- New research can resolve environmental concerns, create new water resources, and promote energy development



## **Project Goals**

- Allow reduced/minimized high quality freshwater withdrawals by identifying non-traditional sources of water.
- Ensure that operators are aware of their options and allow them to assess the availability of these waters to supplement or replace their water supply on a short-term or long-term basis.



## **Project Summary**

- Identify Location and Water Needs of CFPP in the Lower 48 – Both Current and Planned
- Identify Location, Quality and Volume of Non-Traditional Sources of Water
  - Oil and Gas Produced Water
  - Mine Pool Water
  - Lower Quality Ground Water
  - Other Industrial Sources
  - Other?
- Create an Inter-net Based GIS Catalog of Non-Traditional Sources of Cooling Water



## Project Overview

- Budget Period I Data Collection
- Budget Period II System Development
- Budget Period III Beta Test, Launch, Operate
- Technology Transfer Will Occur Throughout the Life of the Project
- ALL and GWPC Plan to Continue Hosting the Site After Project Completion
- Guided by a Project Advisory Council



## Project Advisory Council (PAC)

- GWPC Members
  - State Water Agency Representatives
  - Industry Association Representatives
- USGS Representatives
- Others as Identified



## Synergies

- Energy Water Nexus
- NETL's Oil and Gas Program
- Conventional Oil and Gas
- Unconventional Oil and Gas
  - CBNG
  - CO<sub>2</sub> EOR
  - Gas Shale
- Other National Lab Water Efforts, e.g., SNL, LANL
- CO<sub>2</sub> Sequestration Program



## Contact Information ALL Consulting

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